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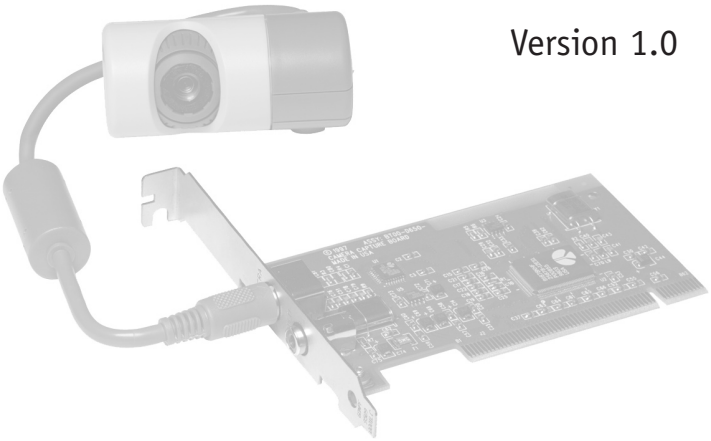
PCI

Jameco Part Number 180110

Video and Camera Capture Solution

User's Guide

Version 1.0



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Notice

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRED OPERATION.

Modifications

Changes or modifications not expressly approved by the party responsible for compliance to the FCC Rules could void the user's authority to operate the equipment.

MADE IN USA

Rockwell PCI Camera Capture

Tested To Comply
With FCC Standards

FOR HOME OR OFFICE USE

CE Statement

This equipment has been tested and complies with EN 55013, EN 55020 and IEC 801-3 part 3 standards.

Caution

To comply with the limits for a Class B digital device pursuant to Part 15 of the FCC Rules, this device must be installed in computer equipment certified to comply with the Class B limits.

These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures: Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

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Chapter 1: Introduction

This chapter provides an introduction to the *PCI Video and Camera Capture Solution User's Guide.* In addition, this chapter provides a general description of this product's features.

About This Manual

This manual is divided into the following sections:

Chapter 1: Introduction

Provides a general introduction to the *PCI Video and Camera Capture Solution*.

Chapter 2: Before You Begin

Provides preliminary instructions necessary to your understanding of the installation. We recommend reading this chapter for instructions on how to make the most of your new Peripheral Component Interface (PCI) bus board and the optional QuartzSight camera.

Chapter 3: Installation

Shows you how to install the PCI board and connect the optional QuartzSight camera. In addition, this chapter provides instructions for connecting other home video equipment, adjusting the focus of the QuartzSight camera, and testing your installation.

Appendix A: Configuring Your Computer for Existing Video Capture Devices

Provides instructions using the PCI board with existing video devices.

Appendix B: PCI Applications Software

Defines the software applications that are included with your PCI package.

Appendix C: QuartzSight Camera Specifications

Provides the specifications for the QuartzSight camera.

Appendix D: Troubleshooting

Provides instructions for troubleshooting any difficulties that might arise from installation or operation of the PCI package.

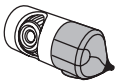
Document Conventions

This section describes the text and icon conventions used throughout this guide, as shown in Table 1 and Table 2.

Table 1. Text Conventions

Text	Description
Italic	Manual titles, names of menus, menu commands, dialog boxes, and dialog box elements are shown in italics. Also used for emphasis.
UPPERCASE	Directory names and filenames are shown in all uppercase.

Table 2. Icon Conventions

Icon	Description
	Appears with sections that apply only to users who have the QuartzSight camera option.
	Alerts you to conditions which could cause serious personal injury.
	Cautionary information to protect your equipment from damage.
	Tip or useful information.

General Description

The PCI Video and Camera Capture Solution is a complete PC camera solution, integrating digital camera and video capture on a single PCI bus board.

The PCI package and associated software applications allow you to capture still images and real-time video using the PCI video capture board and the optional digital camera or other external device. The following components are included:

- PCI video board
- QuartzSight™ digital camera (optional)
- Audio cable
- Video cable
- PCI video driver software (on one CD)
- Software applications for image, video capture, and editing (on two CDs)
- *PCI Video and Camera Capture Solution User's Guide*

The PCI bus board features the Rockwell Bt878 Fusion video decoder and optional Bt832 digital camera interface chip on one board. The board provides digital camera and composite video input to your PC. Fully Windows 95[1] compatible, the PCI video board can be used for image and video capture and editing, video conferencing, and video email messaging and/or Internet video phone.

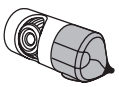
1. Features are also designed to be compatible with Windows 98.

The PCI bus board can be connected to the optional QuartzSight camera and supports the following features:

- Plug and Play PCI Specification version 2.1 compliance.
- CIF (Common Interchange Format) for image capture using the QuartzSight camera.
- NTSC/PAL/SECAM composite video capture at a full 640 x 480 resolution with 24-bit color depth.
- Video email messaging, editing, video conferencing, and manipulation software suite.

The PCI board and its device drivers support both preview and overlay mode, allowing simultaneous viewing of both the source image and the processing in host memory of the source image. The suite of software applications uses the latest technologies for creating, editing, and manipulating digitally captured images and video in any Windows-based multimedia application.

The PCI package allows you to capture and compress video from devices such as VCRs and video cameras at a rate of 30 fps (frames per second). Included with the PCI package is the TrueMotion CODEC (compression-decompression). TrueMotion provides real-time compression and reduces the amount of disk space required to store video by a 20:01 to 5:1 ratio, depending on the image size, quality, and color depth.



Using the optional QuartzSight digital camera technology, the PCI package provides a better fps rate than composite video in a desktop video email messaging or video conferencing application. The PCI package provides real-time color images that you can display on your computer, or through the Internet.

The combination of features in the PCI Video and Camera Capture Solution enables you to create, edit, and manipulate image and video directly from your computer.

Getting More Information

If you experience problems with your PCI board, we recommend contacting the retailer or Original Equipment Manufacturer (OEM) where you purchased the product.

For information on using any of the software applications, please refer to the user guide for that particular product.

Chapter 2: Before You Begin

Before installing the PCI board, review the README file on the Video Driver CD for changes not available at the time of printing. Additionally, read the following sections of this chapter before attempting to install the board:

- System Requirements
- Safety Precautions
- Unpacking and Inspection
- Operational Environment

Note to Windows 98 Users

Although described for Windows 95, your PCI package also works with Windows 98. For information see the Read Me file.

System Requirements

Minimum System Requirements

The PCI Video and Camera Capture Solution has the following minimum system requirements:

- Microsoft Windows 95 operating system
- 133 MHz Pentium processor
- One available PCI 2.1-compliant bus slot
- 16 MB system RAM
- 4x CD-ROM drive
- 46 MB available hard disk space for software applications and drivers
- PCI VGA board that is DirectDraw 5.0-compliant, with 2 MB memory
- 640 x 480 display with 8-bit color depth

Optimum System Requirements

For the best performance of your PCI board and its application software, the following system requirements are recommended:

- 233 MHz Pentium MMX processor.
- 32 MB RAM.
- 800 x 600 display with 16-bit color depth.
- Sound card, microphone, and speakers (for audio capturing and video phone, video conferencing, and video email messaging).
- An ISP (Internet Service Provider) that supports TCP/IP for video phone calls and video conferencing via the Internet.
- V.90 56K modem for video conferencing and video email messaging.

One minute of video can take up to 76 MB. Please make sure you have enough disk space on your hard disk to save your video file.

Safety Precautions

For your protection, observe the following safety precautions when setting up and using your equipment. Failure to observe these precautions can result in serious personal injury and damage to your equipment.

- Do not remove computer cover until the power is unplugged.
- Use only three-pronged (grounded) power outlets.
- Make sure the voltages and frequency of the power outlet match the electrical rating labels on the chassis and monitor.
- Do not press on any component on the board.
- Never push objects of any kind through openings in the equipment. Dangerous voltages may be present. Conductive foreign objects could produce a short circuit that could cause fire, electrical shock, or damage to the equipment.
- When installing the board, be sure to observe the anti-static advisory in the installation section of this user's guide. This will prevent electrical charges that can damage boards and other components.
- Whenever there is danger of lightning, disconnect the cable or TV antenna from the board, and disconnect your computer's power cable.

Unpacking and Inspection

The PCI board is protected by an anti-static envelope. To guard against destructive electrostatic discharge, follow anti-static precautions when you unpack it.

Inside the package you will find the following:

- PCI board
- QuartzSight digital camera (optional)
- Audio cable
- Video cable
- Video driver
- Software applications for image video capture and editing
- *PCI Video and Camera Capture Solution User's Guide*

If any components are missing or damaged, please contact your dealer.

Operational Environment

Table 3 and Table 4 show the maximum ratings for both the PCI board and the QuartzSight camera.

Table 3. Maximum Ratings in Non-Operational Conditions

Non-Operational Conditions	
Temperature	–10° C (–14° F) to + 60° (140° F)
Humidity	80%

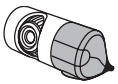
Table 4. Maximum Ratings in Operational Conditions

Operational Conditions	
Temperature	0° C (32° F) to +50° C (122° F)
Humidity	80%

Chapter 3: Installation

This chapter describes the following procedures:

- Installing the PCI video driver
- Installing the PCI board
- Installing the applications software
- Using the PCI board connectors
- Connecting the QuartzSight camera
- Adjusting the QuartzSight camera
- Connecting your home video equipment



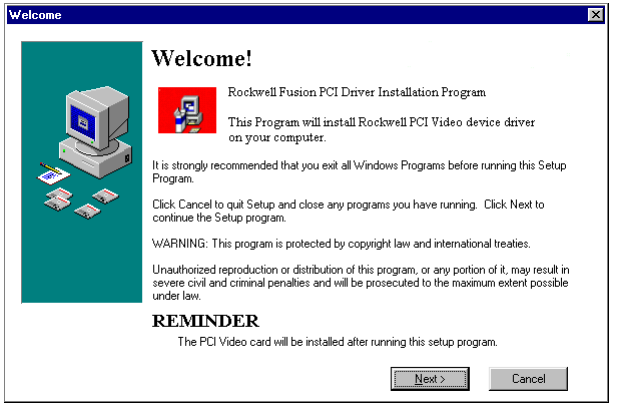
It is essential that you install the board before you connect your QuartzSight camera.

Installing the PCI Video Driver

To install the PCI video driver:

1. Insert the PCI video driver CD. The Welcome window is displayed, as shown in Figure 1.

Figure 1. Welcome Window


Welcome
Welcome!
Rockwell Fusion PCI Driver Installation Program
This Program will install Rockwell PCI Video device driver on your computer.
It is strongly recommended that you exit all Windows Programs before running this Setup Program.
Click Cancel to quit Setup and close any programs you have running. Click Next to continue the Setup program.
WARNING: This program is protected by copyright law and international treaties.
Unauthorized reproduction or distribution of this program, or any portion of it, may result in severe civil and criminal penalties and will be prosecuted to the maximum extent possible under law.
REMINDER
The PCI Video card will be installed after running this setup program.
Next >
Cancel

2. To continue the installation of the PCI video driver, click *Next*. If you have an existing video driver, the alert box in Figure 2 is displayed.

NOTE

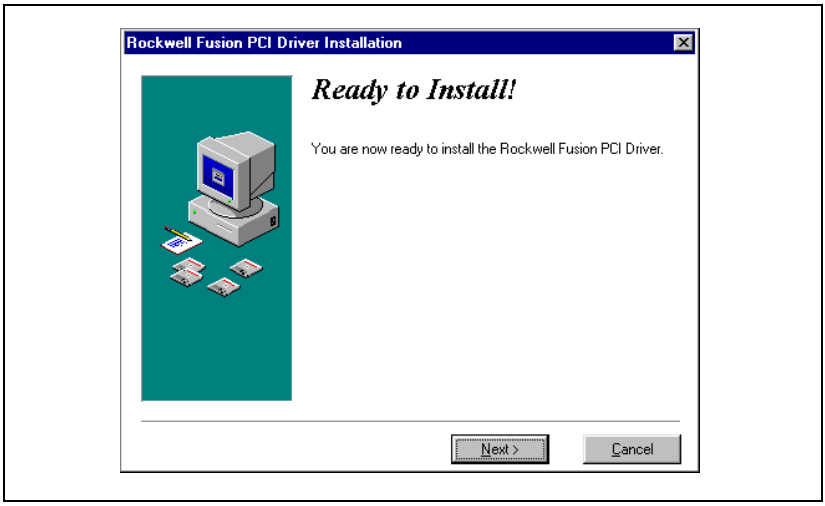
The *Update* button in Figure 2 is provided to perform a software update.

Figure 2. Pre-existing PCI Video Device

Pre-existing Fusion PCI Video Device
A pre-existing Fusion PCI video driver has been detected. Press Update if you are performing a software update, press New if you are installing an additional PCI video capture card.
New
Update
Cancel

3. To disable your pre-existing driver, click *New* (in the alert box). Installation of the PCI video driver will begin, as shown in Figure 3.

Figure 3. PCI Driver Window


Rockwell Fusion PCI Driver Installation
Ready to Install!
You are now ready to install the Rockwell Fusion PCI Driver.
Next >
Cancel

4. To complete the installation of the PCI video driver, click *Next*.

The *Install PCI Video Hardware* window is displayed, as shown in Figure 4.

Figure 4. PCI Video Hardware Window

Install PCI Video Hardware
Please shut down Windows, turn off the power to your computer, then install the PCI video hardware. After installing the hardware, turn on the computer power and restart Windows.
OK

5. Click *OK*.

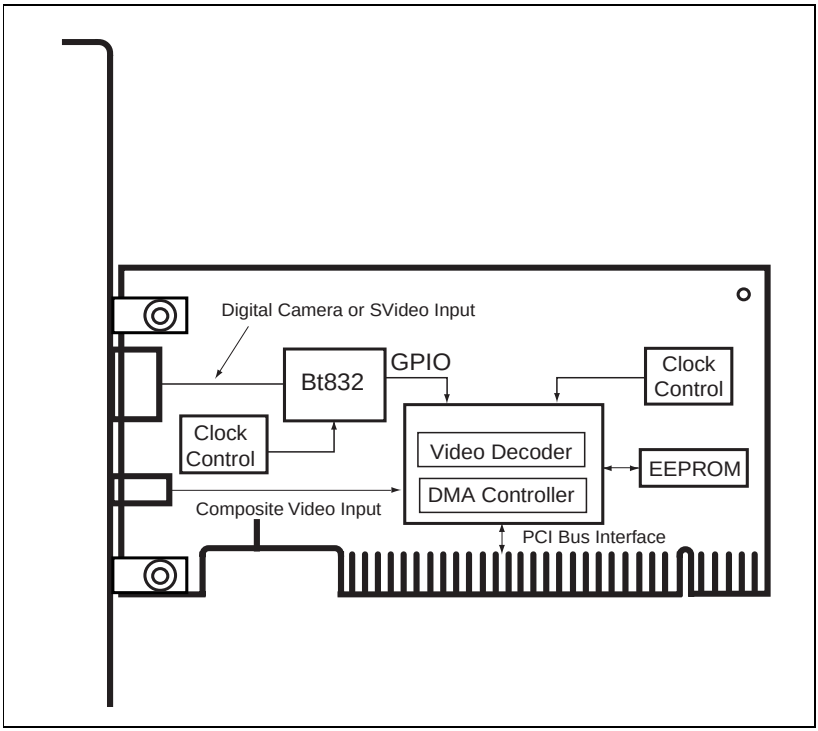
6. Shut down your computer.

Now that you have installed the PCI video driver and shut down your computer, you are ready to install your PCI board.

Installing the PCI Board

Before installing the PCI board, shown in Figure 5, make sure you have a small screwdriver. (This could be either a flathead or Phillips screwdriver, depending upon the type of screws your computer uses.)

Figure 5. PCI Board



To install the board, perform the following steps:

1. Make sure your computer is turned off and unplug the power cord from the wall outlet.

2. Briefly touch the chassis of your computer to ground yourself and to discharge any static electricity.

3. Remove the cover from your computer.

Refer to your computer manuals for instructions on how to remove the cover.

4. Locate an available PCI bus slot. If you have a desktop-style computer, refer to Figure 6. If you have a tower-style computer, refer to Figure 7.

5. Remove the metal back plate from the slot you have chosen and retain the screw. You will need the screw to complete the installation of your board.

6. Align the PCI board's slot connector with the expansion slot, and insert the board into the free slot. Do not force the board if it does not snap easily into place.

NOTE

Your computer may look slightly different from the representations in Figure 6 and Figure 7. For additional information, refer to your computer instruction manuals.

Figure 6. PCI Bus Slot in a Motherboard: Desktop-Style Computer

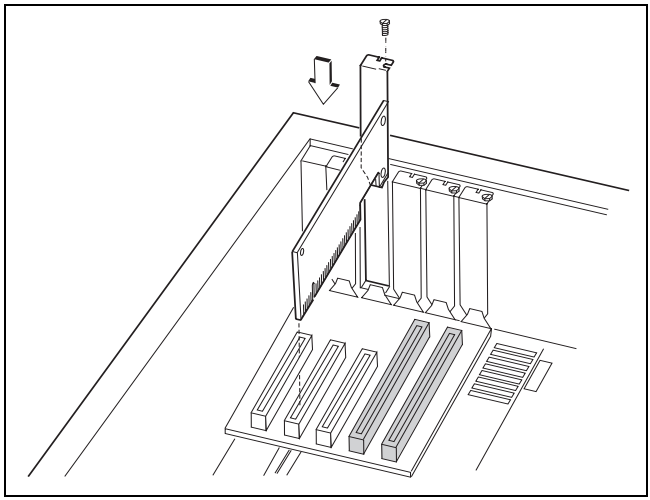
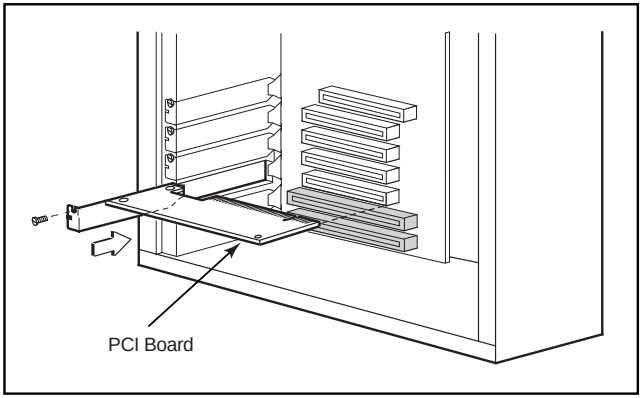


Figure 7. PCI Bus Slot in a Motherboard: Tower-Style Computer



7. Insert the screw through the hole in the board's mounting bracket, and firmly tighten.

8. Replace the cover on your computer.

9. Plug in the power cord, connect your peripheral devices, and turn on your computer.

When Windows reboots, the *New Hardware Found* dialog box appears, indicating that your system has found a new PCI multimedia video device. Windows will finish the installation of the PCI video driver.

Installing the Applications Software

To install applications for your PCI board, you must use the two software CDs in your package.

CD #1 contains:

- CVideo-Mail Lite
- DuckVision
- NetMeeting
- Panorama Picture Creator

CD #2 contains:

- iPhotoExpress
- MediaStudio

These instructions replace all other instructions included with your software applications.

To install the software applications:

1. Insert CD #1 into your CD-ROM drive and follow the instructions that appear.
2. Insert CD #2 and continue with the instructions on your screen.

The following software applications are now installed on your computer:

- CVideo-Mail Lite
- DuckVision
- iPhotoExpress
- MediaStudio
- NetMeeting
- Panorama Picture Creator

Please refer to Appendix B for descriptions of these applications.

Now that you have successfully installed the driver, board, and applications software, you are ready to connect your video equipment.

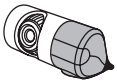
The optional QuartzSight camera and other video devices can be connected while the power to your computer is on.

Using the PCI Board Connectors

If your package includes the QuartzSight camera, your PCI board will have a digital camera-in connector.

If your package does not have a QuartzSight camera, your PCI board will have an SVideo connector instead.

Both packages include an RCA composite video-in connector on the PCI board.



The QuartzSight camera connector provides connection for:

- Video conferencing
- Video email messaging
- Video phone communication

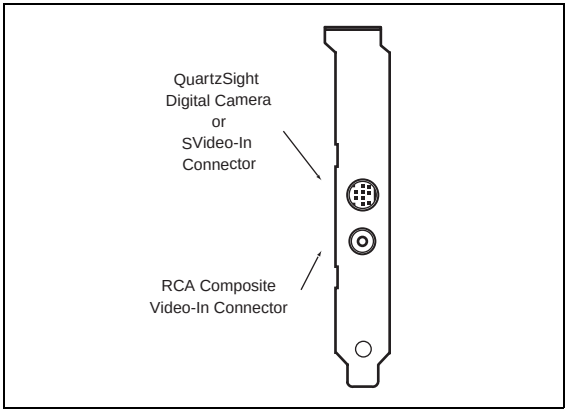
SVideo provides connections to home video equipment, with better quality input.

The RCA jack provides connection for home video equipment, such as:

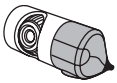
- Video cameras
- VCRs
- TVs
- Other analog cameras or recording devices

Figure 8 shows the location of your connectors.

Figure 8. PCI Board Connector: Rear View from Your Computer

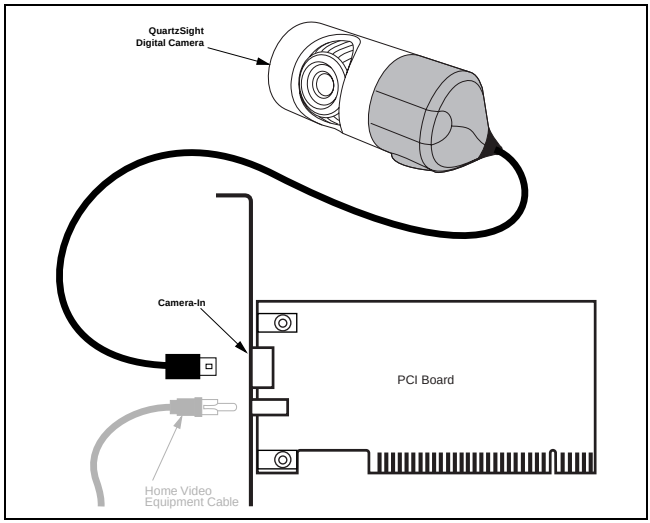


Connecting the QuartzSight Camera

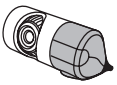


Connect the QuartzSight camera cable, as shown in Figure 9, to the QuartzSight digital camera-in connector.

Figure 9. QuartzSight Camera Connected to PCI Board

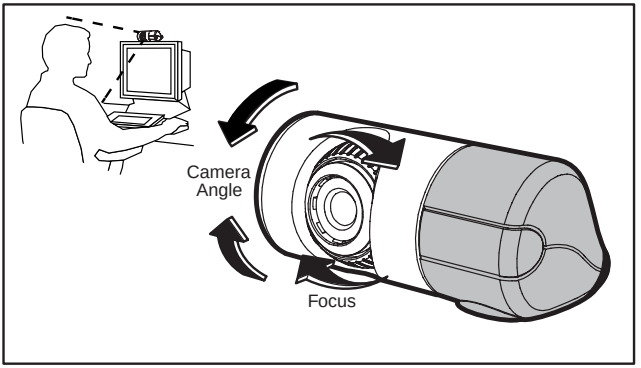


Adjusting the QuartzSight Camera



To improve the quality of your preview image, manually adjust the focus and angle of the QuartzSight camera, as shown in Figure 10.

Figure 10. Manual Adjustment and Position of QuartzSight Camera



Now you are ready to test your PCI board to make sure it works properly with the QuartzSight camera and other video devices. We recommend using iPhotoExpress, which is included in your package.

Testing the PCI Board and QuartzSight Camera Interface

To test the PCI board and the QuartzSight camera:

1. Position the camera on top of your computer monitor or in a convenient location.
2. Click the Windows *Start* button.

3. Point to *Programs*, and click *iPhotoExpress*. This launches the iPhotoExpress application.

4. From the *File* menu, point to *Import* and then point to *Video Capture*.

Alternatively, you can select the *Start* icon from the iPhotoExpress task bar and then select *Import.*

You should see an image in the *Ulead Video Capture* window, as shown in Figure 11, to reflect the image you want to capture.

Figure 11. iPhotoExpress Screen

To initialize the video display, select *Overlay* or *Preview* video mode.

- *Overlay* mode indicates that the incoming video is shown live on the computer screen.
- *Preview* mode indicates that the incoming video is digitized and then shown on the computer screen.

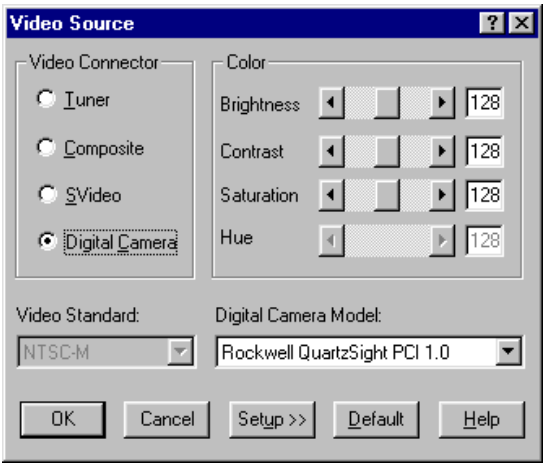
Alternatively, you can refer to the section on Adjusting the QuartzSight Camera Settings or to Appendix D, Troubleshooting.

Adjusting the QuartzSight Camera Settings

To adjust your QuartzSight camera settings:

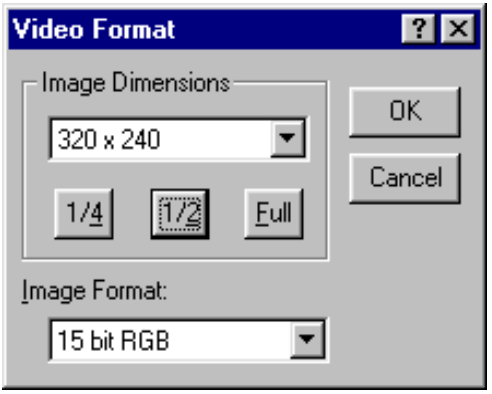
1. Click *Video Source* from the *Ulead Video Capture* window, The Video Source dialog box is displayed, as shown in Figure 12.

Figure 12. The Video Source Dialog Box



2. Select the *Digital Camera* option and click *Setup.* The *Video Format* dialog box is displayed, as shown in Figure 13.

Figure 13. The Video Format Dialog Box



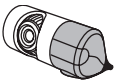
3. Select the desired size of the image on the screen.

NOTE

The full display size for the QuartzSight camera is 352 x 288. The full display size for the analog RCA-in is 640 x 480.

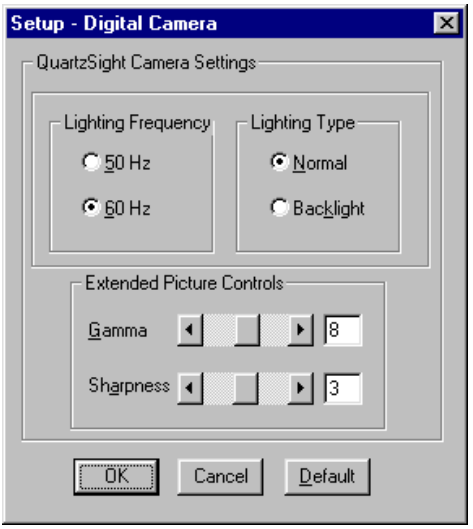
4. From the *Image Format* drop-down list, make the desired selection and click *OK*.

5. Click *OK* again to exit the *Video Format* dialog box.



6. From the *Video Source* dialog box, click the *Setup* button to display settings for the QuartzSight camera, as shown in Figure 14.

Figure 14. QuartzSight Digital Camera Settings



7. Adjust the sharpness, contrast, hue, and brightness of the selected image if needed.

The Lighting Frequency Controls default to 50 Hz for European standards and 60 Hz for USA standards.

8. Click *OK*.

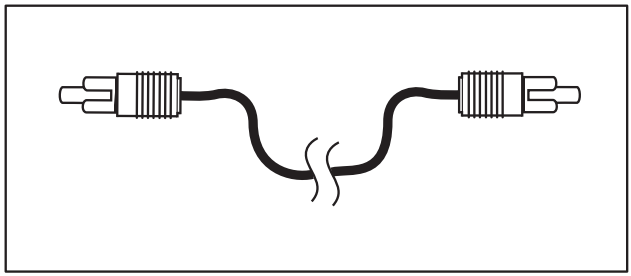
Connecting Your Home Video Equipment

The provided video and audio cables allow you to connect your home video equipment to your computer.

To connect your home video equipment to the PCI board:

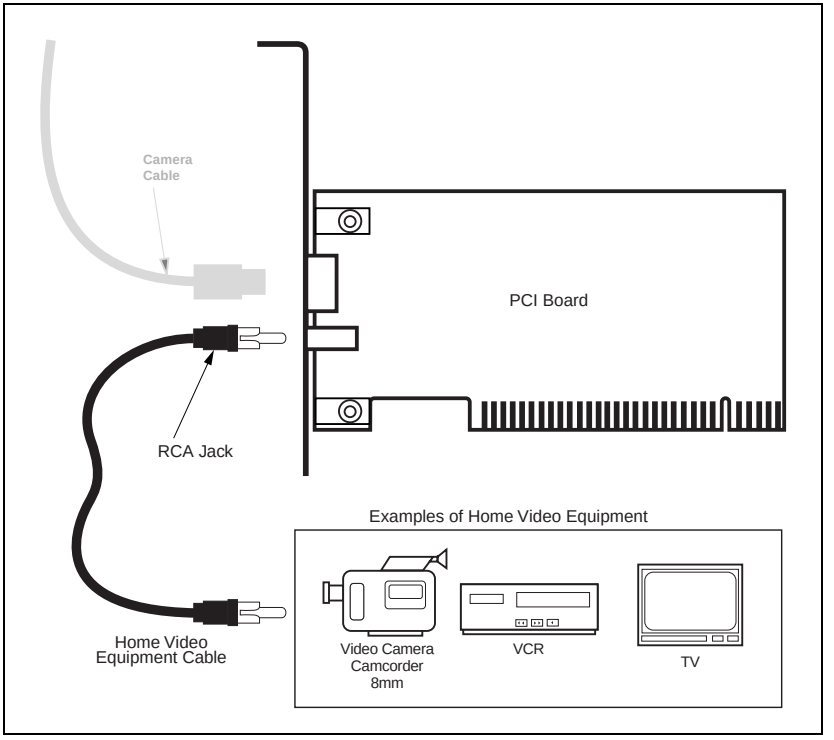
1. Connect the video cable, as shown in Figure 15, to the RCA out jack of your video device.

Figure 15. Video Cable



2. Connect the other end of the video cable to the RCA composite video-in connector located on the PCI board, as shown in Figure 16.

Figure 16. PCI Board Connected to Home Video Equipment

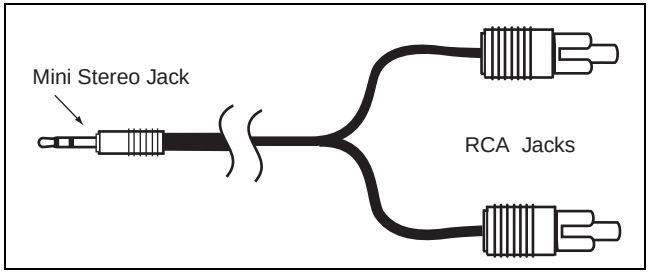


NOTE

Please refer to your owner's manual for locating the RCA video output on your video equipment.

As shown in Figure 17, your audio cable contains a mini stereo jack on one end and two RCA jacks on the other end.

Figure 17. Audio Cable



3. Plug the mini stereo jack into line-in of your computer sound card.

4. Plug the RCA audio jacks into your home video equipment.

NOTE

Stereo audio requires two RCA audio jacks. If your home video equipment has only one RCA audio out, however, connect just one RCA jack to it. This means that you can record only mono on your computer.

NOTE

Please refer to your owner's manual for locating the RCA video output on your video equipment.

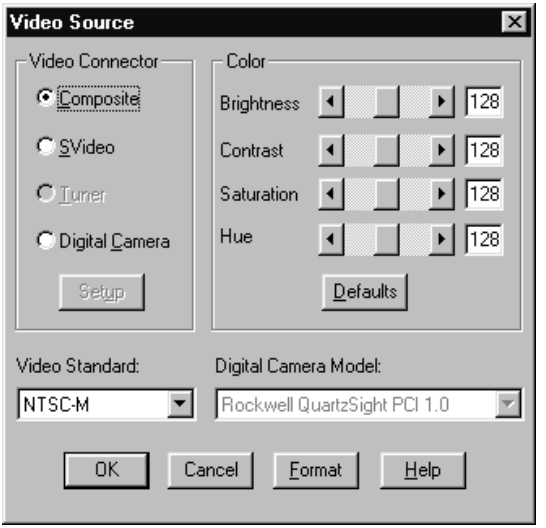
Testing Connections for Home Video Equipment

To test the connections for your home video equipment:

1. From the *Ulead Video Capture* window, choose *Video Source*.

2. From the *Video Source* dialog box, select the *Composite* option from the *Video Connector* area, as shown in Figure 18.

Figure 18. The Composite Option



Adjusting the Composite Video Source

The brightness, contrast, saturation, and hue of the video source can be adjusted in the *Color* area.

NOTE

Refer to your owner's manual for information on adjusting the video and audio quality of your home video equipment.

APPENDIX A: Configuring Your Computer for Existing Video Capture Devices

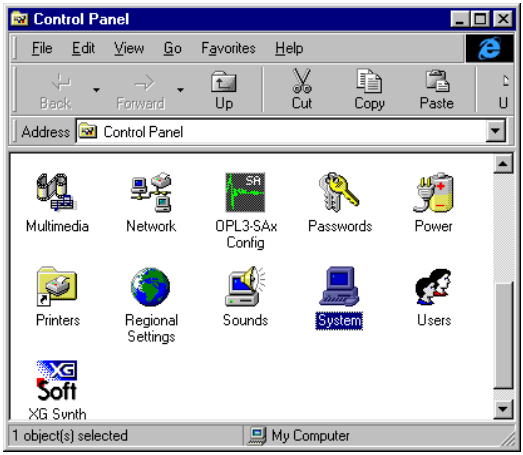
If you have an existing video capture device installed, such as a TV tuner board, a video conferencing board, or a video capturing board, you will need to disable the device driver before installing the PCI board.

To disable an existing device driver:

1. Click the Windows 95 *Start* button, click on *Settings,* and then click on *Control Panel*.

2. The *Control Panel* window is displayed, as shown in Figure 19.

Figure 19. The Windows 95 Control Panel Window



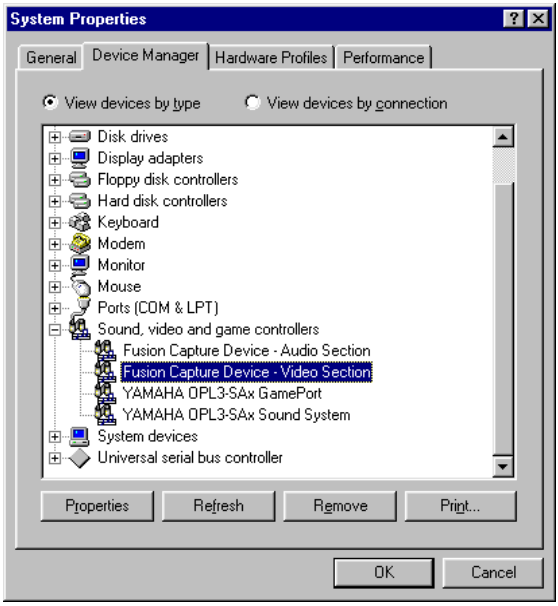
3. From the *Control Panel* window, double-click on *System* to open the *System Properties* window, as shown in Figure 20.

Figure 20. The Device Manager Tab

4. Select the *Device Manager* tab.

5. Double-click on the *Sound, video, and game controller* option to expand the list, as shown in Figure 21.

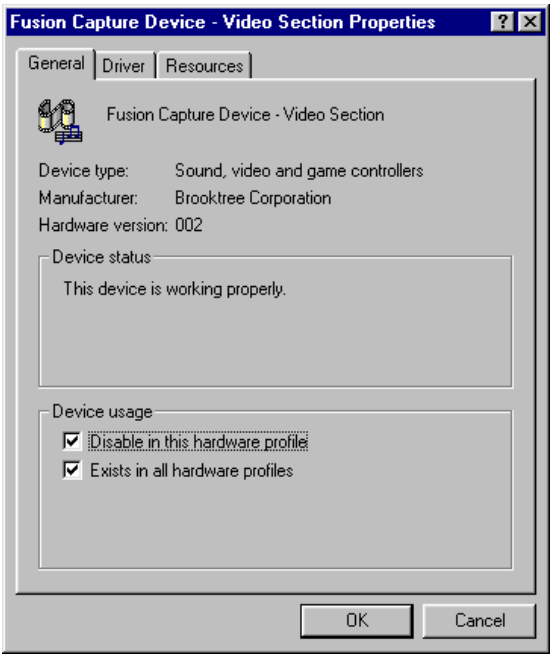
Figure 21. Example of Device Driver



6. Double-click on the device driver that you want to disable.

7. Select the *General* tab, and then select the *Disable in this hardware profile* check box, as shown in Figure 22.

Figure 22. Disabling Existing Video Driver



NOTE

To re-enable the device driver, follow steps 1 through 6. From the *General* tab, de-select the *Disable in this hardware profile* check box. Please refer to your Windows documentation for more information on device drivers.

APPENDIX B: Applications Software

The integrated software package includes the PCI board and digital QuartzSight camera. Table 5 lists the suite of applications included with this release.

Table 5. Software Applications Included

Product	Publisher	Classification	Ver.
CVideo-Mail Lite	Cubic VideoComm	Video Messages	2.0
DuckVision	Duck Corporation	Video Compression CODEC, Recorder	1.0
iPhotoExpress	Ulead Systems	Still Image Editing	1.0
MediaStudio	Ulead Systems	Video Editing	2.5
NetMeeting	Microsoft Corporation	Desktop Video Conference	2.1
Panorama Picture Creator	VideoBrush	Novelty Video	1.0

Software Descriptions

This section defines the software applications included with your package.

CVideo-Mail Lite from Cubic VideoComm

CVideo-Mail Lite provides audio and video for your email messages. With CVideo-Mail Lite installed, you can record video files using a desktop camera, a camcorder, or VCR. You can attach the video/audio file to an email message, and the recipient can double-click on the attachment to play back the video. No special software is required by the recipient.

Some Internet Service Providers (ISPs) may limit file size to 1 MB.

CVideo-Mail Lite product features:

- Allows you to send video/audio clips via email.
- Allows you to save as an attachment or interface directly to MAPI compliant email packages.
- Provides automatic playback for the recipient; no special hardware/software is required for receiving video images.

For more information on CVideo-Mail, please refer to the online Help or visit the CVideo-Mail Web site at:

http://www.cvideomail.com

DuckVision from Duck Corporation

In conjunction with an Intel processor and the Rockwell PCI board, you can capture video up to 30 fps in 24-bit color using the DuckVision “real time” video compression application. DuckVision allows you to record analog audio and video. You can digitize and record video to your computer.

Using DuckVision, you can capture full-motion video without any additional compression hardware.

DuckVision product features:

- 320 x 240 recording at 30 fps in real-time.
- One-button recording and playback of any captured file, with no plug-in required.
- Record from tuner, VCR, or camcorder.
- Duck TrueMotion files can be edited using Media Studio.

In addition to these features, DuckVision provides frame-by-frame accessibility and video playback in a window or full screen. For more information, please refer to the DuckVision online manual, or visit the Duck Web site at:

http://www.duck.com

iPhotoExpress from Ulead Systems

The iPhotoExpress interface takes a simple, easy-to-use approach toward image editing. Using the tools in this application, you can import captured images from your home video equipment. You can create calendars, name cards, posters, screen art, and more. You can also export images for use with other applications.

iPhotoExpress product features:

- Offers a wide variety of templates and sophisticated tools for creating custom greeting cards, business cards, and more.
- Allows you to manipulate and preview captured images via the iPhotoExpress interface.
- Provides guidelines for image editing and visual enhancements, and for added finishing touches.

iPhotoExpress includes the Task Guide online assistant and the iPhotoExpress Screenbook. For more information on viewing these online guides, please refer to the iPhotoExpress online Help. You may visit the Ulead Systems Web site at:

http://www.ulead.com

MediaStudio from Ulead Systems

MediaStudio enables you to perform nonlinear video editing and edit audio clips with special effect filters such as corner-peels, box peels, and split-peels. MediaStudio includes a set of three programs designed to help you produce professional digital video projects.

Used in conjunction with the DuckVision TrueMotion CODEC, video can be edited and saved to disk or CD-R/DVD-R.

MediaStudio product features:

- Video Editor program allows you to work on an entire video project at one time.
- Video Capture program enables you to preview, capture, and play back videos from the Video Capture control bar.
- Image Editor program provides a comprehensive range of image processing commands and tools.

For more information on MediaStudio, please refer to the online manual or visit the Ulead Systems Web site at:

http://www.ulead.com

NetMeeting from Microsoft Corporation

Using the PCI board and the QuartzSight camera in conjunction with Microsoft's NetMeeting, you can communicate with people around the world. NetMeeting's real-time audio allows you to converse with others via the Internet.

Product Features:

Internet video conferencing allows you to send and receive real-time visual images.

- Internet phone/audio conferencing provides real-time, point-to-point conferencing.
- Multipoint data conferencing enables you to share applications, exchange information, and transfer files.

NetMeeting's combination of video and audio features allows you to conduct personal and business-related conferences via the Internet. For more information on NetMeeting, please refer to the online manual or visit the Microsoft Net Meeting Web page at:

http://www.microsoft.com/netmeeting

Panorama Picture Creator from VideoBrush

Panorama Picture Creator enables you to create wide-angle and panoramic images captured from your video camera. Using Panorama Picture Creator, you can build a wide-angle panoramic scene or even a full cylindrical image of an entire area. Series of still photos are “stitched” together to create a long panoramic shot.

By panning a hand-held camera over the scene, Panorama Picture Creator composes seamless panoramic images that can be printed, saved, sent via email, or imported into Web pages and other applications.

Panorama Picture Creator product features:

- Seamlessly creates panoramic images with high-resolution pictures and detailed imaging.
- Simulates “virtual reality” shots to create wide angle photos and images up to a full 360-degree circle.
- Supports a wide range of formats, including PAN (panoramic) for export into panoramic viewers and other applications.

For more information on using Panorama Picture Creator, please refer to the online Help, or refer to the Video Brush Web site at:

http://www.videobrush.com

APPENDIX C: QuartzSight Camera Specification

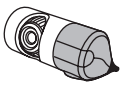


Table 6. Sensor Specification

Parameter	Measured Value	Notes
S/N Ratio	42 dB	15 fps (frames per second), 200 lux, 25°C (77°F)
Fixed Pattern Noise	< 0.5%	
Frame Rate Options	30, 15, 7.5, 5.3, 3.75, 25, 12.5, 6.25, 3.125	fps
Exposure Range	25,000:1	30 fps mode
Resolution	352 x 288	
Aspect Ratio	4:3	

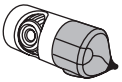


Table 7. Lens Specification

Parameter	Measured Value	Notes
Near Focus Limit	5 cm (2 inches)	
Far Focus Limit	infinity	
Depth of Field	20 cm (8 inches) to infinity	When focused at 60 cm (24 inches)
Distortion	< 6.5%	At edges
Spatial Resolution	> 50% mtf	at 2.7 cycles per degree
Horizontal Field of View	54 degrees	

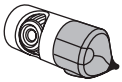


Table 8. Electrical Specification

Parameter	Measured Value	Notes
Supply voltage lower limit	11.4 VDC	
Supply voltage upper limit	12.6 VDC	
Current Consumption	50 mA	Normal mode
	28 mA	Sleep mode
	4 mA	Low power mode
DC = Direct Current		

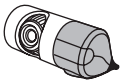


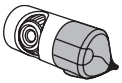
Table 9. Environmental Specification

Parameter	Measured Value	Notes
Lower temperature operating limit	0°C (32°F)	
Upper temperature operating limit	50°C (122°F)	Tested at 80% RH

APPENDIX D: Troubleshooting

This appendix provides answers to problems you may encounter when using the PCI product. Refer to the README file for additional questions and answers that were not available at the time of publication.

Problems with Image Display



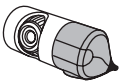
Problem

Image is not previewed on screen.

Solution

Verify the following:

- You have selected *Overlay* or *Preview* mode to refresh the video display window.
- You have installed the correct drivers.
- The board is correctly installed.



Problem

Image quality is poor.

Solution

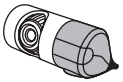
Manually adjust the focus, including hue, brightness, and sharpness (refer to the section on adjusting the QuartzSight camera focus in *Chapter 3: Installation)*. If this does not help, try contacting the manufacturer of the software.

Problem

The captured image is blurred.

Solution

Capture the image using preview mode.



Problem

The image has “banding” on the screen when using the QuartzSight camera.

Solution

Make sure the lighting type is set properly for the video source:

1. From the iPhotoExpress *Options* menu, select *Video Source*.
2. Click the *Setup* button in the *Video Source* dialog box.
3. Select the appropriate lighting type.

The backlight option is used to compensate for contrast between the image and any backlight. The *Normal* option is used when no backlight is set.

Problems with Audio

Problem

There is no sound.

Solution

Verify the following:

- Speakers are connected.
- The *Mute All* check box is de-selected in the Windows *Volume Control* window.
- The audio cable is connected to the input jack on your sound card.
- The PCI board is correctly installed.
- The correct audio source is selected from your audio mixer screen. (Select settings from the Start bar on your computer, then go to the Sound Properties, located on the Control Panel).

Problems with Installing the Application

Problem

The application does not install.

Solution

If the setup for the software application fails to run automatically:

1. Click the *Start* button, point to *Settings*, and then click *Control Panel*.
2. From the *Control Panel* window, double-click the *System* icon.
3. From the *System Properties* dialog box, select the *Device Manager* tab and select your CD-ROM drive.
4. Click the *Properties* button.
5. In the *Properties* dialog box, click the *Settings* tab and select the *Auto insert notification* check box.

Alternatively, you can perform the following steps:

1. Double-click *My Computer.*
2. In the *My Computer* window, right-click the CD-ROM drive icon.
3. On the shortcut menu, click *AutoPlay,* and follow the instructions on your screen.

Problem

A green screen is displayed.

Solution

Check the image format of your application. The driver does not support the YUV12 image format. If YUV12 is currently selected as your image format, change it to YUV9, and your application should work.

Conflicts with Old Drivers

Problem

Windows indicates a conflict with existing drivers.

Solution

Existing PCI drivers may conflict with newer drivers. Try uninstalling any old drivers and then reinstalling the drivers.

Problem Detecting PCI Board

Problem

Windows does not detect a new PCI board.

Solution

The PCI board may not be properly inserted into the bus slot. Make sure the board is securely inserted, and check for any loose cables. Try another PCI bus slot on your computer. Make sure the cables are connected to the appropriate ports on the back of your computer.

Problem

Windows has detected an IRQ conflict.

Solution

Insert the PCI board into another PCI slot.

Application Concerns

Problem

Opening CVideo-Mail Lite causes a General Protection Fault (GPF) error.

Solution

Disable the Fusion audio driver. Refer to Appendix A for instructions on how to disable the existing driver.

Problem

When CVideo-Mail Lite is recording, there is video, but no audio. In addition, the following error message is displayed:

Unable to open audio input device! Perhaps another program is using the sound board.

Solution

Disable the Fusion audio settings by performing the following steps:

1. From your Windows *Start* menu, select *Settings*, then *Control Panel*.
2. Select the *Device Manager* tab, and then *System Properties.*
3. Click *Sound, Video, and Game Controls.*
4. Double-click on the *Bt878 Fusion Capture Device - Audio Section* to open the *Bt878 Fusion Capture - Audio Section Properties* dialog box.

5. From the *General* tab, click on *Disable Bt878 Fusion Audio Device*, then click *OK*.
6. Restart your computer.

Problem

During playback in DuckVision, the frame intermittently freezes.

Solution

This is normal. DuckVision's compression algorithm requires significant CPU processing power.

There are two possible solutions:

1. Close other applications.
2. Lower your video quality.
   a. Click *Video Settings*.
   b. When the *Video Settings* dialog box appears, select a smaller size, a lower frame rate, and a lower video quality.

Problem

When recording, the DuckVision screen does not reflect the live image being recorded; the frame appears to be "frozen."

Solution

This is normal if you are recording video via the QuartzSight camera. The frame will be frozen while DuckVision is recording but will play back as it should.

Problem

DuckVision does not capture video when in overlay mode.

Solution

Contact the manufacturer of your video graphic display board to determine if the board is designed for overlay mode.

Problem

When live video is playing on VideoBrush, the computer crashes, or the screen freezes.

Solution

Restart the computer and the VideoBrush program. When live video is playing, do not attempt to change your video source until you do the following:

1. Select *New Video f*rom the selection panel on the right side of the VideoBrush opening menu.
2. Switch to your new video source.

VideoBrush does not capture 640 x 480 screen size. It will reset the capture to 320 x 240.

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